

Part-Task Performance Measures

Richard L. Layton and Phillip Feld
Defense Systems, Inc.

Fort Leavenworth Research Unit
Stanley M. Halpin, Chief

January 1996

19960423 044

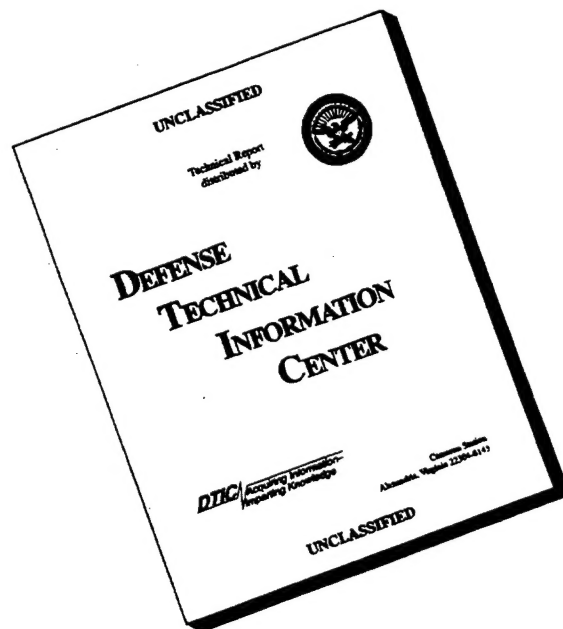


United States Army
Research Institute for the Behavioral and Social Sciences

Approved for public release; distribution is unlimited.

DTIC QUALITY INSPECTED 1

DISCLAIMER NOTICE



THIS DOCUMENT IS BEST QUALITY AVAILABLE. THE COPY FURNISHED TO DTIC CONTAINED A SIGNIFICANT NUMBER OF PAGES WHICH DO NOT REPRODUCE LEGIBLY.

U.S. ARMY RESEARCH INSTITUTE FOR THE BEHAVIORAL AND SOCIAL SCIENCES

**A Field Operating Agency Under the Jurisdiction
of the Deputy Chief of Staff for Personnel**

EDGAR M. JOHNSON
Director

Research accomplished under contract
for the Department of the Army

Defense Systems, Inc.

Technical review by

Douglas K. Spiegel

NOTICES

DISTRIBUTION: This report has been cleared for release to the Defense Technical Information Center (DTIC) to comply with regulatory requirements. It has been given no primary distribution other than to DTIC and will be available only through DTIC or the National Technical Information Service (NTIS).

FINAL DISPOSITION: This report may be destroyed when it is no longer needed. Please do not return it to the U.S. Army Research Institute for the Behavioral and Social Sciences.

NOTE: The views, opinions, and findings in this report are those of the author(s) and should not be construed as an official Department of the Army position, policy, or decision, unless so designated by other authorized documents.

REPORT DOCUMENTATION PAGE

1. REPORT DATE 1996, January		2. REPORT TYPE Final		3. DATES COVERED (from... to) September 1986-August 1987	
4. TITLE AND SUBTITLE Part-Task Performance Measures				5a. CONTRACT OR GRANT NUMBER MDA903-86-C-0204	
				5b. PROGRAM ELEMENT NUMBER 0605502A	
6. AUTHOR(S) Richard L. Layton and Phillip Feld				5c. PROJECT NUMBER M770	
				5d. TASK NUMBER 144	
				5e. WORK UNIT NUMBER S07	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Defense Systems, Inc. 7903 Westpark Drive McLean, VA 22102				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) U.S. Army Research Institute for the Behavioral and Social Sciences ATTN: PERI-RS 5001 Eisenhower Avenue Alexandria, VA 22333-5600				10. MONITOR ACRONYM ARI	
				11. MONITOR REPORT NUMBER Research Note 96-18	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution is unlimited.					
13. SUPPLEMENTARY NOTES COR: Rex Michel					
14. ABSTRACT (<i>Maximum 200 words</i>): The purpose of this Phase I SBIR project was to define and independently evaluate a subset of Army division-level command and control performance measures derived from the Army Command and Control Evaluation System (ACCES). The subset was measures which either directly or indirectly measure planning performance. The evaluation involved a determination of the degree to which this subset agreed with the overall ACCES evaluation of a division's planning performance and with battle outcomes. The intent was to help determine if this measurement subset was sufficiently robust to be applied independently in the laboratory to assist in evaluating planning aids. The subset was used to evaluate the performance of the G3 Plans section of a U.S. Army division during a large-scale command post exercise. The results are contained in this report.					
15. SUBJECT TERMS <div style="display: flex; justify-content: space-between; padding: 5px;"> <div>Planning SBIR</div> <div>Part-task performance Performance measurement</div> <div>Tactical planning Command and control</div> </div>					
SECURITY CLASSIFICATION OF			19. LIMITATION OF ABSTRACT Unlimited	20. NUMBER OF PAGES 40	21. RESPONSIBLE PERSON (Name and Telephone Number)
16. REPORT Unclassified	17. ABSTRACT Unclassified	18. THIS PAGE Unclassified			

CONTENTS

LIST OF FIGURES

LIST OF TABLES

iii

PART-TASK PERFORMANCE MEASURES

Introduction

Various agencies are developing planning aids which will be tested in a laboratory environment where performance cannot be measured by battle outcomes or within the larger context of Division-level command and control. To support these evaluations, a set of internal performance planning measures (i.e., part-task performance measures) is required that focus on the Division-level operations planning function. These measures should closely relate to the comprehensive command and control performance measures embodied in the Army Command and Control Evaluation System (ACCES), thus providing additional credibility to the laboratory findings.

A tentative set of part-task performance measures, based on ACCES measures, has been developed. Values for these measures were calculated in conjunction with a recent ACCES application. This report provides an evaluation of these measures with respect to their suitability for the laboratory environment and their relation to battle outcomes.

Overview of ACCES

ACCES provides quantitative and objective assessment of:

The quality of the processes (and of the systems which support the processes) by which information is used by the commander and his staff in decision-making, and

The overall effectiveness of the decisions made and their implementation.

The essence of ACCES is a set of measures including a small number of measures covering overall command post effectiveness and a much larger menu of diagnostic measures covering specific aspects of the command and control process.

ACCES is based on a view that command posts are analogous to adaptive control systems in that they seek to influence their environment (consisting of other commanders and their staffs, plus the elements of METT-T--Mission, Enemy, Troops, Terrain, and Time) by means of the directives they issue to their subordinates. This view implies that the effectiveness of the command post can be judged by the viability of its directives. Good directives can be executed without the need for modification, beyond the contingencies built into them, and remain in effect throughout their intended period without the need for unanticipated changes. Secondly, effectiveness can be judged by the timeliness of the processes that produce those

directives. Command posts that issue directives (i.e., changes in either missions, assets, schedules, or boundaries, or some combination of these) that prove effective (i.e., accomplish military missions) and/or permit flexible responses in rapidly developing situations (i.e., contingency planning) score well.

The measurement tool treats the command post as an adaptive control system, operating in control cycles, that seeks to keep selected features in its environment within expected boundaries. The general approach, as illustrated in Figure 1, is based on the fact that the command post performs a number of processes in order to support decisionmaking and its implementation.

Of particular significance is the fact that ACCES, in addition to measuring overall effectiveness, provides diagnostic scores for the quality with which each of the processes is performed. Figure 2 lists the processes for which ACCES provides scores, and shows attributes which are measured. In addition to individual command post scores, ACCES also provides for the evaluation of a network of command posts.

Overview of the Application

The ACCES application consisted of a command post exercise (CPX) during which a Mechanized Infantry Division operated in a Southwest Asian environment as part of a Corps in a general war situation. The CPX was a multi-level, 24 hour per day, free-play division-level exercise which lasted a total of 114 hours. The CPX was supported by the Joint Exercise Simulation System (JESS).

The Division's mission was to receive a battle handover from the Corps Covering Force, defend in sector to retain key terrain and destroy the enemy's first operational echelon, and then be prepared to counterattack to complete the destruction of enemy forces in sector. During the exercise the Division operated with three forward brigades (Left, Center, and Right). The exercise was characterized by steady pressure on the Right Brigade throughout the exercise, with an attempted enemy breakthrough near ENDEX; steady pressure on the Left Brigade throughout the exercise, with heightened activity on Day 4; and early, heavy pressure on the Center Brigade on Days 1 and 2, followed by little activity for that brigade the remainder of the exercise.

Performance Measures

Table 1 provides a listing and definitions of the part-task performance measures used to evaluate Division planning. These measures are based on the comprehensive command and control performance measures embodied in ACCES. A discussion of the rationale for each part-task performance measure follows.

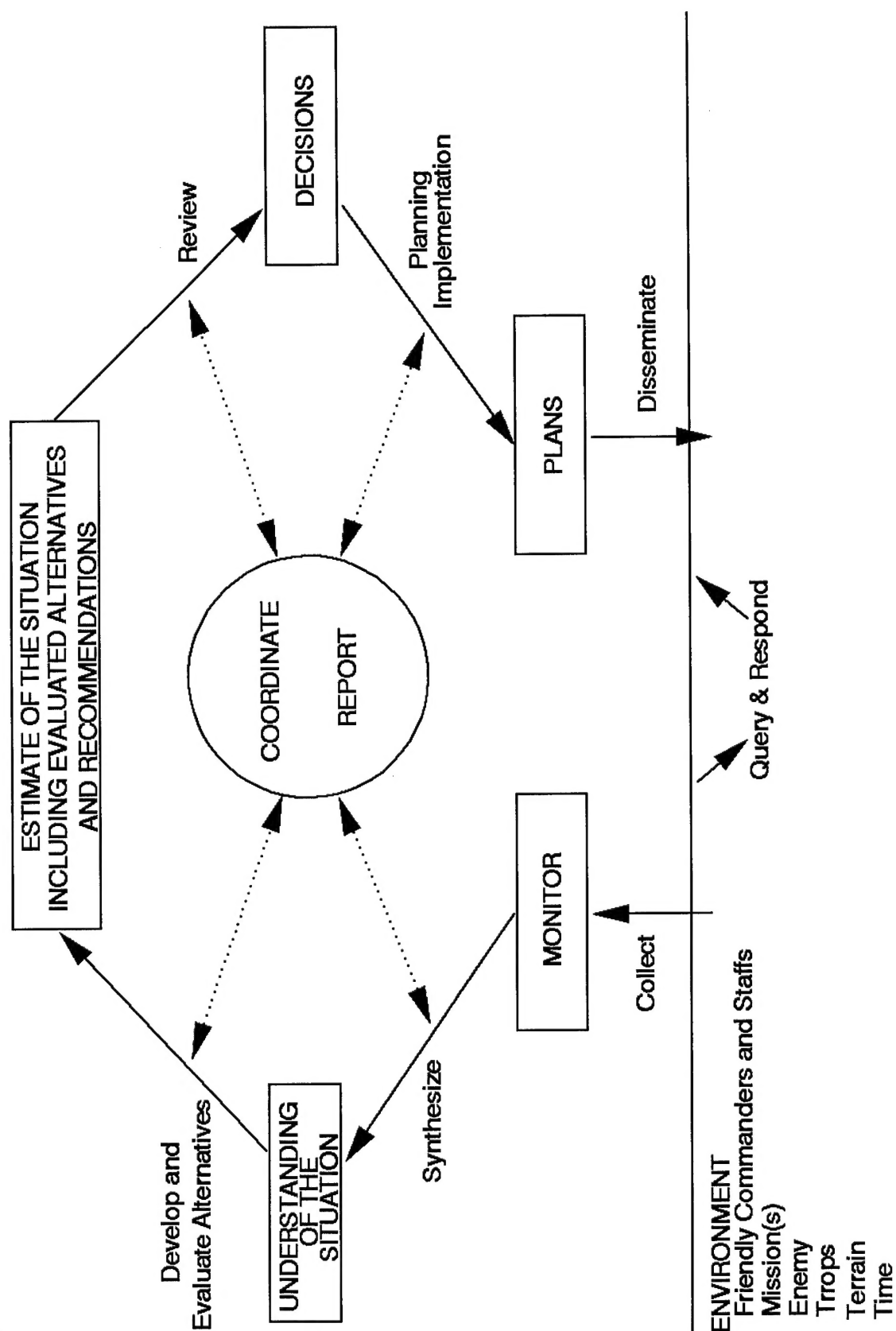


Figure 1. The command post as an adaptive control system

MONITORING	PLAN
COMPLETENESS	TIME FROM DECISION
ACCURACY	CONSISTENCY
TIMELINESS	NOT QUERIED
QUERYING	
IMPACT ON PLAN	COORDINATION
FORECAST CORRECTNESS	MONITORING COMPARABILITY
	UNDERSTANDING COMPARABILITY
UNDERSTANDING	CYCLE TIME
COMPLETENESS	TIMELINESS
QUALITY	TIME FROM DECISION
IMPACT ON PLAN	NOT QUERIED
UNDERSTANDING TIME	
ESTIMATE	NETWORK
MULTIPLE PLANNERS	CONFIGURATION
MULTIPLE OPTIONS	MONITORING COMPARABILITY
PREDICTION COMPLETENESS	UNDERSTANDING COMPARABILITY
PREDICTION QUALITY	PLANNING COMPARABILITY
PREDICTION TIME	UNDERSTANDING QUERIES
	DIRECTIVE COMPARABILITY

Figure 2. Command and Control Processes Measured with ACCES

Table 1

Part-Task Performance Measures

<u>Measure</u>	<u>Definition</u>
Understanding Quality	The number of perceptions of the situation held by the staff section scored as percentage correct, not incorrect, or incorrect.
Options	The number of alternative courses of action considered most likely to occur in the future.
Planners	The number of staff members participating in the development of alternative courses of action.
Queries Required	Was additional (or more complete, timely, or accurate) data required to complete the planning process?
Plan Time Less Than Understanding Time	<p>Was the Plan Time less than the Understanding Time?</p> <p>Plan Time: Median time from the making of an estimate to the end of the time covered by the associated predictions of intended futures.</p> <p>Understanding Time: Median time from expression of an understanding to the end of the period which the understanding covers.</p>
Option Rejection, Commander	Was the recommended course of action rejected by the Commander?
Option Rejection, Other	Was the recommended course of action rejected by someone other than the Commander?
Lead Time Adequacy	Was the planning lead time provided to subordinates adequate? Adequate lead time was defined by the command, in this case, twice the senior headquarter's planning time.

Understanding Quality

An effective staff develops a set of hypotheses about what is going on in the environment (i.e., the elements of METT-T) in order to hedge against uncertainties. An understanding can be thought of as a set of hypotheses dealing with the current situation and the subsequent situation that will occur as a result of the current situation. The quality of understanding is described as correct, not incorrect, or incorrect. If the true situation is reasonably close to what the staff considers "most likely", the understanding is correct. If the true situation is not even included in the staff's set of hypotheses, the understanding is incorrect. An understanding is "not incorrect" if the true situation (or something close to it) is included in the staff's set of hypotheses, but not considered "most likely".

Options

Once understandings of the situation are identified, the staff develops a set of options, or alternative courses of action. Experience with ACCES has made it clear that the better decision processes are characterized by consideration of a number of alternative courses of action that are truly different in nature.

Planners

The development of alternative courses of action can be adversely affected by having too few planners involved in the process.

Queries Required

The staff's planning process is directly dependent on the information that is provided to it. The staff must recognize when data are incomplete, late, or inaccurate.

Plan Time Less Than Understanding Time

Understanding time refers to the period of time, extending into the future, for which the staff assesses and projects the situation; in effect, how far out in time the staff is looking. Plan Time refers to the period of time for which the plan is suppose to give direction. Plan Time must not be greater than Understanding Time, because, if it is greater, the staff is planning into an understanding void.

Option Rejection, Commander

The staff's estimate of the situation includes evaluating alternative courses of action and recommending the optimal alternative to the Commander. A rejection of the recommendation

would indicate that the staff had either not followed the Commander's intent or had produced a recommendation that was flawed in some other way.

Option Rejection, Other

In addition to the Commander, the staff's recommended course of action is generally reviewed by other personnel, e.g., the G3 and/or the Chief of Staff. They could also reject the recommendation.

Lead Time Adequacy

Any plan issued by the Division will require more detailed planning by the affected brigade(s) and other subordinate commands. Adequate time must be available to permit subordinates to complete their planning and prepare for implementation. The Division involved in the application described here considered adequate time to be two-thirds of the total planning time available.

Observed Planning Process

Throughout the application, observers were stationed in the G3 Plans Cell of the Division Main Command Post (DMAIN). In addition to their normal duties as ACCES Observers/Data Collectors, these observers completed a Planning Process Work Sheet for each observed planning event. Figure 3 provides a copy of the Planning Process Work Sheet.

The observers recorded the following ten planning events:

Counterattack Options. Prepared as part of the original Division Operations Plan.

Support to the Center Brigade. A surprise development when the enemy struck where the Division did not expect an attack.

Defense of the Left Flank. The Division's left flank was against an international border -- an allegedly neutral country. The Division Commander was concerned that enemy forces could flow through the "neutral" country and attack the Division's flank. He issued guidance to prepare for that contingency.

The Size of the Right Brigade Sector. The Division Commander was concerned that the size of the Right Brigade sector was too large for its Commander to effectively exercise control.

Plan Number

1. Time Planning begins:

2. Plan Title:

3. Mission Description:

4. Planning Stimulus:

5. Number of Planners participating in cycle:

6. Alternatives considered:

7. Contingencies considered:

8. Does this plan establish new critical information requirements?

9. Did Planners query others for missing information?

10. Did the Commander reject this plan? Why?

11. Was the Plan rejected for other reasons? Why?

By Whom:

12. Does the Plan define outcomes -- victory, defeat or stalemate -- and what happens next?

13. Analysis/wargaming description:

14. Time subordinates notified:

15. Time Plan scheduled to be completed:

16. Time Planning cycle ended:

Observer:

Process Notes

Participant

Contribution

a.

b.

c.

d.

e.

f.

g.

Salient Points:

Figure 3. Planning process work sheet

Deep Strike Planning. A deep strike was needed to deny the enemy use of a tunnel which would allow him to move his attack to the right. Another deep strike was needed to deny the enemy use of a bridge on his main supply route (MSR).

Cut Enemy MSR. When the Division initially failed to close the enemy MSR in the deep strike option, a more detailed plan was proposed to deny the enemy this asset.

Attack on the Tunnel. After the deep strike option failed, another attempt to close the tunnel was planned.

Use of a Separate Infantry Brigade (SIB). After the Division had been in contact with the enemy for approximately three days, and its own forces were reduced, the Division began planning for additional forces from the Corps reserve in order to sustain the defense.

Defense of Critical Road Junction. Due to the terrain in the Division's sector, a road junction was declared to be critical terrain. The Division planned a defense of the road junction against an anticipated airborne assault.

Reconstitution of the Division Reserve. Due to the size of friendly losses and the subsequent use of the Division reserve, the Division had to take some risks in order to have sustaining combat power (including asking Corps for its reserve force). Planning for reconstituting a Division reserve was required.

Evaluation of the Planning Process

Figure 4 provides an evaluation of these individual planning events using the part-task performance measures. The figure also provides a description of both the expected and the actual battle outcomes for each planning event.

The performance of the staff, as described by the part-task performance measures, was generally excellent; this is consistent with the Division's overall planning performance as evaluated by ACCES. Their plans were always based on multiple options and prepared with the input of multiple planners. When queries were required, they were completed. Plan Time was always less than Understanding Time. The staff's recommendations were generally accepted. Also, the lead time they provided to subordinates was always adequate.

Of the ten planning events observed, four resulted in battle outcomes significantly different from the expected outcomes.

The first two cases, Defense of the Left Flank and Defense of the Critical Road Junction, are examples of pure military judgement. Both of these are contingency plans involving preparation for "worst case" scenarios. The Division Commander had decided, during the intelligence preparation of the battlefield phase, that in order to protect his forces he had to prepare these plans. Tacticians assure security by taking precautions against surprise. They must use aggressive reconnaissance and maintain security forces to build contingencies to their force's advantage. Because this scenario had the Division spread very thin across a large piece of poor mobility terrain, movement time was figured in days, not hours. Thus, protection of the force was a very real problem. The Division Commander asked his G2 repeatedly if there were any signs of the enemy moving on the left flank or down toward the road junction. In the left flank case, there was some intelligence which caused the Division concern. First, there was a cross-border fly-over by enemy air, but no attack. Second, there was information that an enemy delegation had met with the neutral country's government. The intelligence associated with the critical road junction was not as compelling, although there were some reports of enemy planes loading airborne forces. Neither one of these contingencies occurred.

Two plans, Deep Strike and Reconstitution of the Division Reserve contained miscalculations on the friendly side. Regarding the Deep Strike, the officers planning the mission did not understand the types of weapon mix which the US Air Force could deliver on a target and, more importantly, what reasonable damage could be expected from a weapon. In both cases, the ordinance on-board the aircraft would not have damaged either the tunnel or the bridge to the degree required by the mission. Both of these targets were reconsidered in later plans (Cut Enemy MSR and Attack on Tunnel). The MSR bridge was, in fact, destroyed. However, the airmobile artillery raid on the tunnel was aborted due to heavy enemy fire against the helicopters. The original Deep Strike planning involved some wasted planning time, but probably did not affect the larger outcome of the Division's mission.

The planning event, Reconstitution of the Division Reserve, involved a misunderstanding of guidance

PLAN	BATTLE OUTCOME									
	EXPECTED OUTCOME					BATTLE OUTCOME				
TITLE:	5	5	5	5	5	5	5	5	5	5
MISSION: Counterattack Options										
STIMULI: Reestablish PL STEEL										
BEGINNING TIME: Initial planning,										
PLAN CYCLE TIME: offensive operations										
BEGINNING TIME: Original Plan										
PLAN CYCLE TIME: 83h										
TITLE: Support to Center Bde										
MISSION: Stop enemy attack										
STIMULI: Enemy attack										
BEGINNING TIME: 301655										
PLAN CYCLE TIME: 15h, 15m										
TITLE: Defense of Left Flank										
MISSION: Ensure Division left flank is protected										
STIMULI: Enemy capability to attack Division flank										
BEGINNING TIME: 302219										
PLAN CYCLE TIME: 8h, 50m										
TITLE: Reduce Size of Right Bde Sector										
MISSION: Reduce span of control										
STIMULI: Commander guidance										
BEGINNING TIME: 011527										
PLAN CYCLE TIME: 10h										

Figure 4. Evaluation of planning events using the part-task performance measures (1 of 3)

PLAN	BATTLE OUTCOME									
	EXPECTED OUTCOME					BATTLE OUTCOME				
OPTIONS	PLANNERS	UNDERSTANDING QUALITY FRIENDLY	UNDERSTANDING QUALITY ENEMY	QUERIES REQUIRED	QUERIES ACCOMPLISHED	PLAN TIME LESS THAN UNDERSTANDING TIME	OPTION REJECTION COMMANDER	OPTION REJECTION OTHER	LEAD TIME ADEQUACY	
3	5	50	-	N	N	Y	N	N	Y	TITLE: Deep Strike MISSION: Deny bridge and tunnel to enemy STIMULI: Protect forces BEGINNING TIME: 011511 PLAN CYCLE TIME: 23h, 57m
6	10	100	-	Y	Y	Y	N	N	Y	TITLE: Cut Enemy MSR (bridge) MISSION: Deny enemy use of MSR STIMULI: Protect forces BEGINNING TIME: 031000 PLAN CYCLE TIME: 19h
6	8	100	-	N	N	Y	N	N	Y	TITLE: Attack on Tunnel MISSION: Deny use of tunnel to enemy STIMULI: Protect forces BEGINNING TIME: 031703 PLAN CYCLE TIME: 12h, 36m
										Bridge would be dropped by artillery. Tunnel would be closed by chemical munitions. Deny enemy use of a bridge on his MSR. Chemical, artillery and FASCAM would deny enemy use of tunnel. It was determined that artillery would not be effective on the bridge. Chemical munitions were not in position to be fired at the tunnel. Use of GLLD on bridge was successful. Mission was aborted after enemy shot down helicopters. Enemy was slowed by chemicals and FASCAM.

Figure 4. Evaluation of planning events using the part-task performance measures (2 of 3)

PLAN	BATTLE OUTCOME									
	EXPECTED OUTCOME					BATTLE OUTCOME				
TITLE:	3	5	50	0	N	N	Y	OPTION REJECTION COMMANDER	OPTION REJECTION OTHER	LEAD TIME ADEQUACY
MISSION: Defense of Critical Road Junction										
STIMULI: Expect airborne attack against critical terrain										
BEGINNING TIME: 041921										
PLAN CYCLE TIME: 11h, 9m										
TITLE: Use of Separate Infantry Brigade (SIB)										
MISSION: Provide combat power to Division										
STIMULI: Loss of combat power										
BEGINNING TIME: 031200										
PLAN CYCLE TIME: 48h										
TITLE: Reconstitution of Division Reserve										
MISSION: Defend										
STIMULI: Maintain Division combat power										
BEGINNING TIME: 041531										
PLAN CYCLE TIME: 20h, 30m										

*Corps denied request for forces three times.

Figure 4. Evaluation of planning events using the part-task performance measures (3 of 3)

coming from Corps. Corps periodically gave the Division guidance that another unit would be provided to the Division from the Corps reserve. However, each time the Division formally asked the Corps for the unit the answer was either "no" or "not yet". The Corps Commander was waiting for the situation to develop. At the end of the exercise, the Corps had begun to reposition a unit into the Division area, but had not yet given the Division operational control. Had the game continued another 6-12 hours, the unit would have become part of the Division. The Commander did maintain a small Division reserve throughout the majority of the exercise.

In three of the observed events where battle outcomes generally were consistent with the expected outcomes, the evaluation of the planning process by the part-task performance measures resulted in less than perfect scores.

Planning for support to the Center Brigade began as somewhat of a surprise. The Division did not expect to receive early fighting in the Center Brigade sector. When it occurred, the Division began to maneuver units to aid the brigade, but Center Brigade's sector was very large and the terrain was hard to negotiate, so it took some time for reinforcements to get into position. The fighting did not appear very intense. At one point, the Division Commander stated that a single battalion could handle the fight. The fight lasted less than 24 hours. The G2 advised the Commander several times that this was not the main attack. The enemy sustained some losses in this battle and did not pursue the attack in the Center Brigade sector. Throughout, the enemy showed no signs of building up forces behind those in contact. The enemy quickly abandoned this fight to pursue attacks in other areas of the Division and did not push at the Center Brigade again during the exercise.

On the second day of the exercise, the Division Commander issued guidance to reduce the size of the Right Brigade's sector. The staff developed options, but did not recommend that the Commander adopt any of the options. Both the ADC-M and the G3 advised against the plan. After discussing the situation with the Right Brigade Commander, the Division Commander dropped the idea.

The use of the Separate Infantry Brigade was closely related to the Reconstitution of the Division Reserve event. Initially the Corps planners directed the Division to plan for this unit. The Division was then

refused the use of the SIB by the Corps Commander. The same process was repeated through two more iterations. Just prior to ENDEX, Corps was positioning the SIB nearer to the Division boundary, but would not turn over operational control to the Division. The Division can not be faulted in this case as they were responding to what Corps told them to do.

Evaluation of the Part-Task Performance Measures

This application demonstrated the ability of the part-task performance measures to identify excellent performance on the part of the planning staff and to accomplish this independent of other, more comprehensive, command and control performance measures.

In those cases where the part-task performance measures identified less than optimal performance, battle outcomes were generally significantly different from the expected outcomes.

Although additional investigation is required, the results to date give indication that the part-task performance measures could be used to evaluate planning aids in a laboratory environment where performance cannot be measured by battle outcomes or within the larger context of Division-level command and control.

APPENDIX A

PLANNING PROCESS WORK SHEETS

Plan Number 1

1. Time Planning begins: ORIGINAL PLAN
 2. Plan Title: COUNTER ATTACK OPTIONS
 3. Mission Description: REESTABLISH PL STEEL
 4. Planning Stimulus: INITIAL PLANNING
 5. Number of Planners participating in cycle: 5
 6. Alternatives considered:
CATK LIBERTY (1st Bde)
CATK VANGUARD (2nd Bde)
CATK FRED (2nd Bde)
CATK MACON (4th Bde)
CATK PANTHER (4th Bde)
Disposition:
NOT USED
NOT USED
NOT USED
TUNNEL RAIL
NOT USED
 7. Contingencies considered:

Disposition:

 8. Does this plan establish new critical information requirements?
NO
 9. Did Planner query others for missing information?
NO
 10. Did the Commander reject this plan? Why?
NO
 11. Was the Plan rejected for other reasons? Why?
NO
- By Whom: _____

12. Does the Plan define outcomes -- victory, defeat or stalemate -- and what happens next?

13. Analysis/wargaming description:

Worked out before observation

14. Time subordinates notified: _____

15. Time Plan scheduled to be completed: _____

16. Time Planning cycle ended: 032309

Observer: _____

Process Notes

<u>Participant</u>	<u>Contribution</u>
a. <u>C, PLANS</u>	<u>Guidance.</u>
b. <u>PLAN OEE</u>	<u>OPTIONS</u>
c. <u>PLAN OEE</u>	<u>OPTIONS</u>
d. <u>PLAN OEE</u>	<u>OPTIONS</u>
e. <u>PLAN OEE.</u>	<u>TRAVEL TIMES</u>
f. _____	_____
g. _____	_____

Salient Points: _____

Plan Number 2

1. Time Planning begins: 301655
 2. Plan Title: SUPPORT TO 48 Bde.
 3. Mission Description: REINFORCE 48 Bde
 4. Planning Stimulus: ENEMY CONTACT
 5. Number of Planners participating in cycle: 5
 6. Alternatives considered: CWOP 1-108 AR
CWOP 3-69 AR
CWOP 2-12 / INEFFECTIVE
Disposition: Best option used
 7. Contingencies considered: DECEPTION PLAN
3-69 ARMOR ADDED STRENGTH
Disposition: used
used.
 8. Does this plan establish new critical information requirements?
WILL ENEMY ATTACK IN FAST?
 9. Did Planner query others for missing information?
G-2
 10. Did the Commander reject this plan? Why?
NO
 11. Was the Plan rejected for other reasons? Why?
NO
- By Whom: _____

12. Does the Plan define outcomes -- victory, defeat or stalemate -- and what happens next?

MUST STOP ENEMY AT 48 Mile, MAIN
ATTACK MUST HAPPEN IN EAST, OUR STRENGTH,

13. Analysis/wargaming description:

TIME DISTANCE FACTORS and ENEMY PRESSURE

14. Time subordinates notified: 010730

15. Time Plan scheduled to be completed: _____

16. Time Planning cycle ended: 010814

Observer: _____

Process Notes

<u>Participant</u>	<u>Contribution</u>
a. <u>C, PLANS</u>	<u>Guidance / options</u>
b. <u>PLANS OEE</u>	<u>options</u>
c. <u>FSE</u>	<u>Fire SPT</u>
d. <u>LOG</u>	<u>Log SPT</u>
e. <u>LG</u>	<u>Guidance</u>
f. _____	_____
g. _____	_____

Salient Points: _____

Plan Number 3

1. Time Planning begins: 302219
 2. Plan Title: DEFENSE OF LEFT FLANK
 3. Mission Description: ENSURE DIVISION'S LEFT FLANK IS PROTECTED
 4. Planning Stimulus: CG CONCERN
 5. Number of Planners participating in cycle: 8
 6. Alternatives considered: Disposition:
ATTACK 3-69 RI
MOVE 2-101 IN TO BLOCK
MOVE 44 BDE
2-101 OWN AREA O/O
CATK SW
PUSHOUT TO N.W.
 7. Contingencies considered: Disposition:

 8. Does this plan establish new critical information requirements?
NO
 9. Did Planner query others for missing information?
NO
 10. Did the Commander reject this plan? Why?
NO
 11. Was the Plan rejected for other reasons? Why?
NO
- By Whom: _____

12. Does the Plan define outcomes -- victory, defeat or stalemate -- and what happens next?

NO WELL ALTHOUGH DIVISION MAINTAINED
SOME FORCES CAPABLE OF RESPONDING

13. Analysis/wargaming description:

TIME DISTANCE FACTORS OF MOVING FORCES

14. Time subordinates notified: _____

15. Time Plan scheduled to be completed: _____

16. Time Planning cycle ended: 010710

Observer: _____

Process Notes

<u>Participant</u>	<u>Contribution</u>
a. <u>C₁ PLANS</u>	<u>Guidance</u>
b. <u>PLANS OEE</u>	<u>OPTIONS</u>
c. <u>PLAN OCE</u>	<u>options</u>
d. <u>PLANS OEE</u>	<u>options</u>
e. <u>Log</u>	<u>Log Supt</u>
f. <u>Engineer</u>	
g. <u>G-2</u>	<u>Intelligence</u>
<u>ADA</u>	

Salient Points: G-2 CONSISTENTLY STATED ENEMY
WOULD NOT ~~FOR~~ ATTACK INTO FLANK

Plan Number 4

1. Time Planning begins: 011511
 2. Plan Title: Deep Strike
 3. Mission Description: Deny Bridge and Tunnel To Enemy.
 4. Planning Stimulus: Requirement To Protect Forces
 5. Number of Planners participating in cycle: 3
 6. Alternatives considered:
ARTILLERY ON TUNNEL
ARTILLERY ON BRIDGE
CHEMICAL ON TUNNEL
Disposition:
ATTEMPTED.
NOT USED.
USED.
 7. Contingencies considered:
LAZER GUIDED BOMBS ON BRIDGE
Disposition:
USED.
 8. Does this plan establish new critical information requirements?
NO
 9. Did Planner query others for missing information?
NO
 10. Did the Commander reject this plan? Why?
NO
 11. Was the Plan rejected for other reasons? Why?
NO
- By Whom: _____

12. Does the Plan define outcomes -- victory, defeat or stalemate -- and what happens next?

NO -- CAUSED MUCH STRONGER PLANNING
ON BRIDGES TUNNEL NARROW CLOSED, ENEMY
DELAYED FOR PERIOD.

13. Analysis/wargaming description:

14. Time subordinates notified: _____

15. Time Plan scheduled to be completed: _____

16. Time Planning cycle ended: 021507

Observer: _____

Process Notes

<u>Participant</u>	<u>Contribution</u>
a. <u>C, PLANS</u>	<u>Guidance</u>
b. <u>PLANS OEE</u>	<u>Options</u>
c. <u>PLANS OEE</u>	<u>Options</u>
d. <u>PLANS OEE</u>	<u>TARGETING</u>
e. _____	_____
f. _____	_____
g. _____	_____

Salient Points: _____

Plan Number 5

1. Time Planning begins: 011527
 2. Plan Title: Size of 2nd Bde Sector
 3. Mission Description: Reduce Size of 2nd Bde
Command and Control
 4. Planning Stimulus: CG - SPAN OF CONTROL
 5. Number of Planners participating in cycle: 5
 6. Alternatives considered:

<u>MOVE 2-101 INTO POSITION LEFT OF 2nd Bde</u> <u>MOVE 3-69 and INDEPENDENT TF</u> <u>TF PAUSE (USE OF DTAC)</u> <u> </u> <u> </u> <u> </u>	Disposition: <u>NOT USED</u> <u>NOT USED</u> <u>NOT USED</u> <u> </u> <u> </u> <u> </u>
--	---
 7. Contingencies considered:

<u> </u> <u> </u> <u> </u> <u> </u>	Disposition: <u> </u> <u> </u> <u> </u> <u> </u>
--	--
 8. Does this plan establish new critical information requirements?
NO
 9. Did Planner query others for missing information?
Bde S-3 and DTAC
 10. Did the Commander reject this plan? Why?
yes - decided PLAN WAS NOT NECESSARY
AFTER TALK WITH Bde COMMANDER
 11. Was the Plan rejected for other reasons? Why?
NO
- By Whom:

12. Does the Plan define outcomes -- victory, defeat or stalemate -- and what happens next?

13. Analysis/wargaming description:

14. Time subordinates notified: 020130

15. Time Plan scheduled to be completed: _____

16. Time Planning cycle ended: 020130

Observer: _____

Process Notes

<u>Participant</u>	<u>Contribution</u>
a. <u>C.G.</u>	<u>Guidance.</u>
b. <u>C, PLANS</u>	<u>OPTIONS</u>
c. <u>PLANS OEE</u>	<u>OPTIONS</u>
d. <u>ADC-M</u>	<u>Recommendations</u>
e. <u>G-3</u>	<u>OPTIONS</u>
f. _____	_____
g. _____	_____

Salient Points: _____

Plan Number 6

1. Time Planning begins: 031000
2. Plan Title: CUT ENEMY MSR-Bridge.
3. Mission Description: DENY ENEMY USE OF MSR

4. Planning Stimulus: Protect Forces

5. Number of Planners participating in cycle: 10

6. Alternatives considered:

ARTILLERY
CHEMICAL
BAI
CAS
MAU CHICK
GLLD

Disposition:

WOULD NOT COMPLETE ACTION
NOT USED
NOT AVAILABLE
NOT AVAILABLE
NOT AVAILABLE
USED

7. Contingencies considered:

Disposition:

8. Does this plan establish new critical information requirements?

NO

9. Did Planner query others for missing information?

Air Force; Logistics; FSE; DTAC;
Bde. 5-3

10. Did the Commander reject this plan? Why?

NO

11. Was the Plan rejected for other reasons? Why?

NO

By Whom: _____

12. Does the Plan define outcomes -- victory, defeat or stalemate -- and what happens next?

WEAPON USED had to deny use of
BRIDGE TO ENEMY

13. Analysis/wargaming description:

14. Time subordinates notified: _____

15. Time Plan scheduled to be completed: _____

16. Time Planning cycle ended: 032000

Observer: _____

Process Notes

<u>Participant</u>	<u>Contribution</u>
a. <u>C₂ PLANS</u>	<u>OPTIONS</u>
b. <u>PLANS OEE</u>	<u>OPTIONS</u>
c. <u>PLANS OEE</u>	<u>options/TARGETTING</u>
d. <u>FSE</u>	<u>ARTILLERY OPTIONS</u>
e. <u>ENGINEER</u>	<u>INITIAL Request to deny</u>
f. <u>LOGISTICS</u>	<u>SUPPLIES AVAILABLE.</u>
g. <u>TERRAIN TEAM</u>	<u>ENEMY OPTIONS</u>
<u>ADA</u>	<u>OPTIONS</u>

Salient Points: _____

<u>RAMO</u>	<u>AIR AVAILABLE.</u>
<u>G-2</u>	<u>ENEMY ESTIMATE.</u>

Plan Number 7

1. Time Planning begins: 031200
 2. Plan Title: USE OF SIB
 3. Mission Description: Provide combat power to
The Division
 4. Planning Stimulus: Loss of Forces
 5. Number of Planners participating in cycle: 5
 6. Alternatives considered: Corps Reserve
Move 2 Divs of Infantry Div
Give SIB to Division of CCA
Disposition: _____

 7. Contingencies considered: _____

_____ Disposition: _____

 8. Does this plan establish new critical information requirements?
NO
 9. Did Planner query others for missing information?
Corps
 10. Did the Commander reject this plan? Why?
NO
 11. Was the Plan rejected for other reasons? Why?
Corps rejected options; wanted to
maintain units as Corps Reserve
- By Whom: G-3

12. Does the Plan define outcomes -- victory, defeat or stalemate -- and what happens next?

13. Analysis/wargaming description:

14. Time subordinates notified: _____

15. Time Plan scheduled to be completed: _____

16. Time Planning cycle ended: 051200

Observer: _____

Process Notes

<u>Participant</u>	<u>Contribution</u>
a. <u>C, PLANS</u>	<u>Guidance.</u>
b. <u>PLANS OFF</u>	<u>options</u>
c. <u>PLANS OFF</u>	<u>options</u>
d. <u>PLANS OFF</u>	<u>options</u>
e. <u>PLANS OFF</u>	<u>Travel time.</u>
f. _____	_____
g. _____	_____

Salient Points: _____

Plan Number 8

1. Time Planning begins: 031703
2. Plan Title: ATTACK ON TUNNEL
3. Mission Description: DENY ENEMY USE OF TUNNEL
TO MOVE TROOPS AND SUPPLIES
4. Planning Stimulus: INITIAL ORDER
5. Number of Planners participating in cycle: 8
6. Alternatives considered: CPS NOT AVAILABLE
BAI NOT AVAILABLE
GLLD NOT AVAILABLE
LGB NOT AVAILABLE
ARTILLERY USED
CHEMICAL USED
7. Contingencies considered: _____ Disposition: _____

8. Does this plan establish new critical information requirements? NO
9. Did Planner query others for missing information? DTAC CONSIDERED THIS DEEP BATTLE NOT
CURRENT BATTLE DID NOT TAKE ACTION
10. Did the Commander reject this plan? Why? NO
11. Was the Plan rejected for other reasons? Why? NO
- By Whom: _____

12. Does the Plan define outcomes -- victory, defeat or stalemate -- and what happens next?

13. Analysis/wargaming description:

14. Time subordinates notified: _____

15. Time Plan scheduled to be completed: 040539

16. Time Planning cycle ended: _____

Observer: _____

Process Notes

<u>Participant</u>	<u>Contribution</u>
a. <u>C, PLANS</u>	<u>PLANNING GUIDANCE</u>
b. <u>FSE</u>	<u>ARTILLERY TARGETS</u>
c. <u>G-4</u>	<u>LOGISTICS</u>
d. <u>PLANS OEC</u>	<u>OPTIONS</u>
e. <u>PLANS OEC</u>	<u>OPTIONS</u>
f. <u>PLANS OEC</u>	<u>OPTIONS</u>
g. <u>PLANS OEC</u>	<u>OPTIONS</u>

Salient Points: _____

Plan Number 9

1. Time Planning begins: 041531
 2. Plan Title: Reconstitution of Reserve
 3. Mission Description: Division Reserve Force
 4. Planning Stimulus: Corps pulls Force Division using as Reserve
 5. Number of Planners participating in cycle: 4
 6. Alternatives considered:

<u>TF 3-69 on 6 hour string</u>	Disposition: <u>Not used.</u>
<u>CAV from Rear Area WSM</u>	<u>C&NO</u>
<u>Request 1 BN from SIB</u>	<u>Corps NO</u>
<u>Put 3-507 on 6 hour string</u>	<u>used</u>
_____	_____
_____	_____
 7. Contingencies considered:

Disposition: _____

 8. Does this plan establish new critical information requirements?

 9. Did Planner query others for missing information?
DTAC; Logistics; Rear

 10. Did the Commander reject this plan? Why?
NO

 11. Was the Plan rejected for other reasons? Why?
NO

- By Whom: _____

12. Does the Plan define outcomes -- victory, defeat or stalemate -- and what happens next?

13. Analysis/wargaming description:

14. Time subordinates notified: 041659

15. Time Plan scheduled to be completed: _____

16. Time Planning cycle ended: 051200

Observer: _____

Process Notes

<u>Participant</u>	<u>Contribution</u>
a. <u>C, PLANS</u>	<u>Guidance</u>
b. <u>PLANS OEE</u>	<u>Time/Distance</u>
c. <u>PLANS OEE</u>	<u>Options</u>
d. <u>PLANS OEE</u>	<u>Options</u>
e. _____	_____
f. _____	_____
g. _____	_____

Salient Points: _____

Plan Number 10

1. Time Planning begins: 041921
 2. Plan Title: Defense of Critical Road Junction
 3. Mission Description: Defend Against Enemy Airborne ATK
 4. Planning Stimulus: Defense of Critical Terrain
 5. Number of Planners participating in cycle: 5
 6. Alternatives considered:
Hold 44 Bde
Move TF 101 to Y
NM to hold MSA
Disposition:

 7. Contingencies considered:

Disposition:

 8. Does this plan establish new critical information requirements?
NO

 9. Did Planner query others for missing information?
NO

 10. Did the Commander reject this plan? Why?
NO

 11. Was the Plan rejected for other reasons? Why?
NO

- By Whom: _____

12. Does the Plan define outcomes -- victory, defeat or stalemate -- and what happens next?

13. Analysis/wargaming description:

14. Time subordinates notified: 050830

15. Time Plan scheduled to be completed: _____

16. Time Planning cycle ended: 050830

Observer: _____

Process Notes

<u>Participant</u>	<u>Contribution</u>
a. <u>C. Plans</u>	<u>Guidance</u>
b. <u>PLANS OEE</u>	<u>Options</u>
c. <u>PLANS OEE</u>	<u>Options</u>
d. <u>PLANS OEE</u>	<u>Time/Distance</u>
e. <u>PLANS OEE</u>	<u>Time/Distance</u>
f. _____	_____
g. _____	_____

Salient Points: _____
